

Amendments to the Claims

A complete list of pending claims follows, with indicated amendments:

1. (Currently Amended) A method for managing the rebuild commands directed to a drive, the drive having a first non-volatile memory and a cache;

enabling the cache of the drive;

recording in a second non-volatile memory ~~first memory location~~ each the rebuild ~~command~~ ~~commands~~ directed to the drive; and

periodically causing the drive to flush its cache ~~the cached data associated with the~~ ~~to cause the~~ rebuild commands in the cache to be transmitted to the ~~its~~ first non-volatile memory of the drive;

wherein the each rebuild command directed to drive is at least temporarily recorded in the second non-volatile memory ~~memory location~~ during the period that the cache of the drive is enabled.

2 (Original) The method for managing the rebuild commands directed to a drive of claim 1, further comprising the step of disabling the cache of the drive following the successful rebuild of the drive.

3. (Currently Amended) The method for managing the rebuild commands directed to a drive of claim 2, wherein the step of causing the drive to flush its cache ~~the cached data~~ to the ~~its~~ first non-volatile memory comprises the steps of:

maintaining a count of the number of commands stored in the second non-volatile

memory first memory location; and

causing the drive to flush ~~the data to its~~ cache non-volatile memory when the count of the number of commands stored in the second non-volatile memory first memory location reaches a predetermined threshold.

4. (Currently Amended) The method for managing the rebuild commands directed to a drive of claim 3, further comprising the step of clearing the second non-volatile memory first memory location and the count following the successful flushing of ~~data from~~ the cache to the first non-volatile memory.

5. (Original) A storage array, comprising:
multiple drives, wherein each drive comprises,
non-volatile storage media for storing data; and
a write cache for caching data associated with write commands received
by the drive; and

drive controllers, wherein each drive controller is associated with and coupled to a drive of the storage array, wherein each drive controller comprises a first memory, wherein the first memory is operable to store a history of write commands transmitted from each drive controller to its associated drive; and

wherein each drive controller is operable to manage the rebuild of its associated drive by:

enabling the write cache for the drive;

recording each write command sent to the drive in the first memory;

periodically causing the drive to flush the data in the write cache of the drive; and

disabling the write cache for the drive upon the successful completion of the rebuild of the drive.

6. (Original) The storage array of claim 5, wherein each drive controller is operable to clear its first memory following the indication of the successful flushing of the data in the write cache of the associated drive.

7. (Original) The storage array of claim 5, wherein each drive controller comprises a second memory for recording the number of commands stored in the first memory.

8. (Original) The storage array of claim 7, wherein each drive controller is operable to cause its associated drive to flush the data in the write cache when the number of commands stored in the first memory reaches a predetermined threshold.

9. (Original) The storage array of claim 5, wherein the first memory is non-volatile.

10. (Original) A method for rebuilding the storage media of a drive, wherein the drive is in communication with a write cache that may be selectively enabled, the method comprising:

enabling the write cache for the drive;

transmitting one or more commands to the drive;

writing the one or more commands to a journal; and

forcing the drive to flush the data in the write cache to the storage media.

11. (Original) The method for rebuilding the storage media of a drive of claim 10, further comprising the step of clearing the journal.

12. (Original) The method for rebuilding the storage media of a drive of claim 11, further comprising the step of disabling the write cache for the drive following the successful rebuild of the media of the drive.

13. (Original) The method for rebuilding media in a drive of claim 10, further comprising the steps of:

providing a count of commands sent to the drive; and

wherein the step of forcing the drive to flush the data in the write cache is performed once the count of commands sent to the drive reaches a predetermined value.

14. (Original) The method of claim 13, further comprising the step of clearing the journal following the successful flushing of the data in the write cache.

15. (Original) The method claim 13, further comprising the step of disabling the write cache following the successful rebuild of the media of the drive.

16. (Original) The method of claim 10, further comprising the step of clearing the journal after the drive flushes all data in the write cache and transmits a message indicating that

the cached data was written to the media.

17. (Original) The method of claim 10, where the journal is comprised of non-volatile memory associated with a drive controller.

18. (Original) A drive controller operable to communicate with a drive through a communications channel, comprising:

a first memory for recording commands transmitted from the drive controller to the drive during the period that the drive is being rebuilt;

a second memory for storing a count of the commands recorded in the first memory;

wherein, during the period that the drive is being rebuilt, the drive controller is operable to enable the write cache of the drive and cause the drive to flush the data in the write cache of the drive when the count of the commands reaches a predetermined threshold.

19. (Original) The drive controller of claim 18, wherein the drive controller is operable to disable the write cache of the drive following the successful rebuild of the drive.

20. (Original) The drive controller of claim 19, wherein the first memory comprises non-volatile memory.